REMARKS

In response to the Final Office Action dated August 23, 2006, Applicants respectfully request reconsideration based on the above amendments and following remarks. Applicants respectfully submit that the claims as amended are in condition for allowance.

Claims 1-4, 7-19, 21 are pending in the present application. Claims 1-4, 7, 10, 1-4, 7, 10, 11, 14, 16-19 and 21 are rejected. Claims 8, 9, 12, 13, 15 and 22-25 are withdrawn from consideration. Claims 1, 17 and 18 have been amended, Claims 5, 6, 20, 25 and 26 have been previously canceled, and Claim 7 is presently canceled by this amendment, leaving claims 1-4, 10, 11, 14, 16-19 and 21 for consideration upon entry of the present amendments and following remarks. In particular, independent claims 1 and 18 have been amended to include the limitations of canceled claim 7. Amended claim 17 has been amended to fall within the range claimed in amended independent claim 1. Thus, it is respectfully submitted that the above amendments to claims 1, 17 and 18 are proper for consideration under 37 CFR 1.116.

No new matter has been added. Reconsideration and allowance of the claims are respectfully requested in view of the following remarks.

Claim Rejections Under 35 U.S.C. §103(a)

Claims 1-4, 7, 10, 11, 16, 18 and 19 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Naito (U.S. Patent No. 6,075,649, hereinafter "Naito") in view of Yamaguchi (U.S. Patent No. 6,876,408, hereinafter "Yamaguchi"). The Examiner states that Naito discloses all of the elements of claims 1-4, 7, 16, 18 and 19 except, *that the refractive index of the prism sheet is in a range from about 1.4 to 1.7*, which the Examiner states is disclosed primarily in column 13, lines 30-36 of Yamaguchi. The Examiner states that Naito and Yamaguchi disclose all of the elements of claims 10 and 11 except, *the light emission angle is arranged from about 5.86° to about 26.23° and that the inclined surfaces are configured such that light incident on one of the inclined surfaces travels in accordance with the claimed equations 1 to 3*, which the Examiner further states would have been obvious to one having ordinary skill in the art. Applicants respectfully traverse.

It is respectfully submitted that the invention of the present application provides for maximizing luminance distribution through a prism sheet and improving front and side viewing

angles of an LCD device. The prism sheet includes at least two inclined surfaces and a peak angle therebetween that is from about 90° to about 120°. Further, the peak angle is selected based on a refraction index of the prism sheet in order to maximize luminance therethrough and improve front and side viewing angles.

In contrast, Figure 2 of the primary Naito reference discloses at least two inclined surfaces having an arc-shaped vertex therebetween and a vertex angle therebetween disclosed being in a range from 30° to 120° and more preferably being an acute angle (i.e., 40° to 90°). Col. 4, lines 14-16. In fact, Naito teaches that "[h]owever, there is **no particular restriction** imposed with regard to this vertex angle, it preferably being in the range from 30° to 120° and more preferably being in the range from 40° to 90°" (Emphasis added.) Col. 4, lines 12-16. Thus, Naito teaches away from the range of about 90° to about 120°, as in amended claims 1 and 18. Moreover, Naito does not teach a peak angle in conjunction with a refraction index of the prism sheet in a range from about 1.41 to about 1.49 as in amended claims 1 and 18.

However, the Examiner states that Yamaguchi discloses a device wherein the refractive index is in a range from about 1.41 to 1.49 and cites Col. 13, lines 30-36. It is respectfully submitted that said section of Yamaguchi merely discloses a refractive index of 1.49 at column 13, line 32. Further, Yamaguchi discloses at column 6, line 58 – column 7, line 2, that "[i]t should also be noted that refractive index of the lens substrate 24 is **not limited in any particular value** but is **preferably between 1.4 and 2** from the standpoint of collimating capability and the like. According to the present invention (inclusive of an aspect in which the light entrance areas are rectangular), the microlenses 26a need not be hemispherical and they may advantageously take on a form produced by cutting a sphere by means of a plane which does not pass through the center thereof (smaller one of the resultant spherical crown form) or an ellipsoid (of revolution) through a plane perpendicular to its major axis (smaller one of the resultant cut products)." (Emphasis added.) Thus, Yamaguchi teaches away from a light emission surface with a "peak angle".

A *prima facie* case of obviousness may also be rebutted by showing that the art, in any material respect, teaches away from the claimed invention. *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997) (Applicant argued that the prior art taught away from use of a protective layer for a reflective article having a thickness within the claimed range of

"50 to 100 Angstroms." See MPEP § 2144.05 (III). MPEP § 2144.05 (III) provides that an Applicant can rebut a presumption of obviousness based on a claimed invention that falls within a prior art range by showing "(1) [t]hat the prior art taught away from the claimed invention...or (2) that there are new and unexpected results relative to the prior art." *Iron Grip Barbell Co., Inc. v. USA Sports, Inc.*, 392 F.3d 1317, 1322, 73 USPQ2d 1225, 1228 (Fed. Cir. 2004). To establish unexpected results over a claimed range, applicants should compare a sufficient number of tests both inside and outside the claimed range to show the criticality of the claimed range. *In re Hill*, 284 F.2d 955, 128 USPQ 197 (CCPA 1960). MPEP § 716.02(d)(II).

To that end, the unexpected results obtained by having a peak angle in the range of 79° to about 140° *and* a refraction index of the prism sheet is in a range from about 1.41 to about 1.49 is identified in Table 1 in the specification as originally filed. Table 1 reflects optimizing the luminance **and** viewing angle by varying a peak angle in a range of about 79° to about 140° with a refraction index in a first group of 1.41 – 1.49. In particular, Table 1 and accompanying description on pages 20-22 of the specification as originally filed indicate that the refraction index is set as "1.4" (e.g., 1.41-1.49) and that the luminance and the viewing angle are both effectively improved when the peak angle α is preferably in the range of 90° to 120°. Table 1 and the accompanying description thereof thus support the criticality of the claimed range in amended claims 1 and 18 to define over Yamaguchi and Naito, either alone or in combination. Moreover, there is no motivation to combine Yamaguchi with Naito, in either reference, as suggested by the Examiner.

It is respectfully submitted that (1) Naito and Yamaguchi teach away from the claimed ranges of both peak angle **and** refractive index; (2) Applicants have shown new and unexpected results for optimizing luminance and viewing angle by having a peak angle **and** refractive index in the claimed ranges; and (3) there is no motivation to combine Naito and Yamaguchi, as suggested by the Examiner.

Neither Naito nor Yamaguchi teach or suggest, either alone or in combination, a light incident surface for receiving the light; and a light emission surface for emitting the light incident on the light incident surface, wherein the light emission surface includes at least one light concentrate unit which has at least two inclined surfaces on which the light is incident and refracted, wherein a **peak angle between the two inclined surfaces is in a range from about**

90° to about 120° *and* a refraction index of the prism sheet is in a range from about 1.41 to about 1.49, as in amended claim 1, and similarly claimed in amended claim 18. Thus, independent claims 1 and 18, including claims depending therefrom, i.e., claims 2-4, 7, 10, 11, 14, 16, 17, 19 and 21, define over Naito in view of Yamaguchi.

Reconsideration and withdrawal of the relevant rejection of claims 1-4, 7, 10, 11, 16, 18 and 19 under § 103(a) is thus respectfully requested.

Claim 14 stands rejected under 35 U.S.C. § 103(a) as being obvious over Naito and Yamaguchi in view of Stevenson (U.S. Patent No. 6,846,089) for the reasons stated on page 4 of the Detailed Action. Applicants respectfully traverse.

Claim 14 depends from claim 1, which is submitted as being allowable for defining over Naito in view of Yamaguchi as discussed above. Furthermore, it is respectfully pointed out that use of integrally forming the body with the light incident surface and light emission surface allegedly taught by Stevenson does not cure the deficiencies noted above with respect to Naito and Yamaguchi. Therefore, it is submitted that claim14 defines over Naito and Yamaguchi in view of Stevenson at least for this reason and respectfully request allowance of the same.

Reconsideration and withdrawal of the relevant rejection of claim 14 under § 103(a) is thus respectfully requested.

Claim 17 stands rejected under 35 U.S.C. § 103(a) as being obvious over Naito and Yamaguchi in view of Kojima et al. (U.S. Patent No. 5,797,668) for the reasons stated on page 4 of the Detailed Action. Applicants respectfully traverse.

Claim 17 depends from claim 1, which is submitted as being allowable for defining over Naito and Yamaguchi as discussed above. Furthermore, it is respectfully pointed out that use of a refraction index varying in proportion to a value of the peak angle allegedly taught in Kojima et al. does not cure the deficiencies noted above with respect to Naito and Yamaguchi. Therefore, it is submitted that claim 17 defines over Naito and Yamaguchi in view of Kojima et al. at least for this reason and respectfully request allowance of the same.

Reconsideration and withdrawal of the relevant rejection of claim 17 under § 103(a) is thus respectfully requested.

Claim 21 stands rejected under 35 U.S.C. § 103(a) as being obvious over Naito and Yamaguchi in view of Moon et al. (U.S. Patent Application Publication No. 2003/086255) for the reasons stated on page 5 of the Detailed Action. Applicants respectfully traverse.

Claim 21 depends from claim 18, which is submitted as being allowable for defining over Naito and Yamaguchi as discussed above. Furthermore, it is respectfully pointed out that use of a plurality of lamps arranged in parallel allegedly taught in Moon et al. does not cure the deficiencies noted above with respect to Naito and Yamaguchi. Therefore, it is submitted that claim 21 defines over Naito and Yamaguchi in view of Moon et al. at least for this reason and respectfully request allowance of the same.

Reconsideration and withdrawal of the relevant rejection of claim 21 under § 103(a) is thus respectfully requested.

Response to Arguments

In response to Applicants' argument filed February 1, 2006, that Naito teaches away from the range of about 90° to 140°, the Examiner submits that Naito actually anticipates angles that fall within the range of 90° to 140°. Although the claimed ranges may fall in the broad range taught by Naito, Naito teaches ranges more preferably being in the range from 40° to 90° at Col. 4, lines 12-16. That combined with the criticality of the claimed ranges of the present application disclosed above rebut a presumption of obviousness as discussed above.

In response to Applicants' argument filed February 1, 2006, that there is no motivation to combine Yamaguchi with Naito, in either reference, the Examiner merely cites col. 2, lines 23-24 of Yamaguchi for establishing motivation. However, the cited section merely states that a "liquid crystal display apparatus comprising such a lighting apparatus, that can display an image of high contrast over a wide range of viewing angles" as it relates to the Summary of the Invention for Yamaguchi. In other words, the cited section by the Examiner merely points out a first object of the invention of Yamaguchi and provides no motivation to modify the invention of either Naito or Yamaguchi to arrive at Applicants' invention as claimed.

Conclusion

In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicants' attorney hereby authorizes that such fee be charged to Deposit Account No. 06-1130.

Respectfully submitted,

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Date: October 20, 2006